



Unsealed Roads

Council's Unsealed Road Maintenance & Construction Program

Background

The Port Pirie Regional Council manages approximately 1035 kilometres of unsealed roads. These roads are vital for the community and serve a number of users from local traffic, school buses, farming vehicles and machinery.

The Unsealed Road Construction and Maintenance Manual supports Port Pirie Regional Council to ensure the sustainability of assets by breaking down road maintenance into 6 categories.

Along with data collected, Council reconciles feedback from a number of community organisations and residents to allocate each unsealed road to these 6 categories. Sections of a single road may also be separated into different categories depending on use and condition.

By listing roads into categories based off the criteria shown in the table on page 2, Council is able to prioritise funds, resources and material available towards higher use roads, providing higher standard service and more frequent maintenance.

Operational works generally consists of maintenance grading using a grader and a tow behind roller or separate self-propelled roller. This work is ideally conducted when there is natural moisture in the ground. There are times during the year when this is not achievable and depending on the level of risk involved it is determined whether roads are dry graded, or a water cart is used in conjunction with the grader and roller.

Maintenance

There are 5 levels of road maintenance

Re-Sheeting – Placing an additional 100mm – 150mm of compacted gravel on top of the existing surface to improve roads which have aged due to ongoing use and weather.

Heavy Grades - Roads that have sustained major wearing require a rip and reform. Additional works, machinery and materials are needed to bring the road back to a sustainable working carriage. Reconstruction is required which entails reshaping the road base and adding compacted gravel.

Light/Medium Grades – Using a grader and a roller to undertake maintenance to improve the surface of a road and make them smoother for vehicles. Roads identified following inspection 3 times per year.

Track Upgrade – As traffic movements change, roads which do not have a sheeted surface and are currently listed as category 5 & 6 roads, are re-evaluated and upgraded to category 4 to allow appropriate maintenance. Usually initiated by a customer request and considered by the Asset Management Committee.

Fire Tracks - These are category 5 and 6 roads that are unformed, have no wearing surface and are strategically located and used by emergency services along with the local public when required during fire season. PPRC ensure that these tracks are passable and ready for use if required before the start of the fire season.

Service

Below is the 2024 table of scheduled work for the renewal and maintenance of unsealed roads along with the road hierarchy category list. It should be noted that the schedule needs to be viewed with flexibility to ensure that seasonal weather events can be responded to as and when required.

Resource	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Grader 1	RS/H	RS/H	RS/H	RS/H	RS/H	RS/H	L/M	L/M	FT	RS/H	RS/H	RS/H	RS/H Re-sheeting or heavy grades Capex – interchangeable due to methodology and required plant for task TU Track Upgrade Capex L/M Light/Medium Grades Opex L/M* Light/Medium Grades Opex – grading only undertaken in suitable natural moisture conditions, or if road risk assessed and requires grading urgently. FT Fire Tracks Opex It should be noted that the schedule should be viewed with flexibility to allow for seasonal weather conditions and or events.
Grader 2	RS/H	RS/H	RS/H	RS/H/ TU	RS/H	RS/H	L/M	L/M	FT	RS/H	RS/H	RS/H	
Grader 3	L/M*	L/M*	L/M*	L/M	L/M	L/M	L/M	L/M	FT	L/M	L/M*	L/M*	
Water Cart (PPRC)	L/M*	L/M*	L/M*								L/M*	L/M*	
Roller (PPRC)	RS/H	RS/H	RS/H	RS/H/ TU	RS/H	RS/H				RS/H	RS/H	RS/H	
Water Cart (Contractor)	RS/H	RS/H	RS/H	RS/H/ TU	RS/H	RS/H				RS/H	RS/H	RS/H	
Roller (hired)	RS/H	RS/H	RS/H	RS/H	RS/H	RS/H				RS/H	RS/H	RS/H	
Water Cart (hired)	RS/H	RS/H	RS/H	RS/H	RS/H	RS/H				RS/H	RS/H	RS/H	
No. of Operators	7	7	7	6	6	6	3	3	3	6	7	7	

Category	Length	Description	Target Service Level
Category 1	206km	Collector connection to sealed roads. Formed and sheeted, carry high priority local traffic such as school buses, traffic count averages 40-60 vehicles per day.	<ul style="list-style-type: none"> Sheeted width 6m (minimum) to 8m (maximum) Sheeting depth 150 mm compacted Average material life – 12 years Grading up to 2 times per year using water carts in dry times, may be another grade in extreme conditions following inspection*
Category 2	212km	Local Access, high use. Formed and sheeted, provide all year access to residence and farms. Traffic count averages 20-40 vehicles per day.	<ul style="list-style-type: none"> Sheeted width 6m (minimum) to 8m (maximum) Sheeting depth 150mm compacted Average material life – 14 years Grading up to 2 times per year using water carts in dry times may be another grade in extreme conditions following inspection*
Category 3	152km	Local Access, medium use. Provide all year access to residences and farms. Traffic count averages 10-20 vehicles per day.	<ul style="list-style-type: none"> Sheeted width 6m Sheeting depth 100mm compacted Average material life – 14 years Grading up to 1 time per year using water carts in dry times, 2 for bus routes following inspection*
Category 4	98km	Local Access, low use. Provide all year access to residences and farms. Traffic count averages less than 10 vehicles per day.	<ul style="list-style-type: none"> Sheeted width 4m (minimum) to 6m (maximum) Sheeting depth 50 to 100 mm compacted Average material life – 16 years Grading up to 1 time every 2 year using water carts in dry times following inspection*
Category 5	330km	Formed, not sheeted. Access to farming land for movement of plant, machinery, and livestock. Not all weather.	<ul style="list-style-type: none"> Width will vary, maintain 7 m where possible Grade/reshape infrequently to suit conditions Inspect prior to fire season
Category 6	37km	Access to farm paddocks by local farmers. Disused road reserves or land allocated for roads never opened that may be leased or unleased.	<ul style="list-style-type: none"> Rural unformed graded roads are low use roads only and do not attract renewal or maintenance A track road that is required to be upgraded must be upgraded to a minimum standard of Category 4

*Rip and reform sections of road when rideability is significantly reduced due to corrugations and potholes

Although a high level of data and reporting goes into categorising unsealed roads, a number of factors can contribute to unexpected condition changes. Travelling speed, weather and increased traffic can deteriorate a road quicker than scheduled maintenance has calculated for. If you believe a road is unsafe or needs immediate repairs, please contact the **Port Pirie Regional Council on (08) 8633 9666**.